ENVIRONMENTAL CHEMISTS

Date of Report: June 19, 1997 Date Received: June 16, 1997 Project: Metro Grab, PO #M57538

Date Samples Extracted: June 17, 1997 Date Extracts Analyzed: June 18, 1997

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

Samples Processed Using Method 3005A Results Reported as mg/L (ppm)

Sample ID	Chromium	Copper	<u>Nickel</u>	<u>Zinc</u>
M57538	0.47	0.35	0.64	< 0.05
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

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Date of Report: June 19, 1997 Date Received: June 16, 1997 Project: Metro Grab, PO #M57538

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 78777 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.47	0.46	2	0-20
Copper Nickel Zinc	mg/L (ppm) mg/L (ppm) mg/L (ppm)	0.35 0.64 <0.05	0.33 0.61 <0.05	6 5 nm	0-20 0-20 0-20

Laboratory Code: 78777 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% F MS	Recovery MSD	Acceptance Criteria	Relative Percent Difference
Analyte.	Omis	rever	nesuit	MIS		Criteria	Difference
Chromium	mg/L (ppm)	5	0.47	85	86	80-120	1
Copper	mg/L (ppm)	5	0.35	86	83	80-120	4
Nickel	mg/L (ppm)	10	0.64	86	87	80-120	1
Zinc	mg/L (ppm)	5	< 0.05	86	86	80-120	0

Laboratory Code: Spike Blank

	Reporting	Spike	% R	ecovery	Acceptance	Relative Percent
Analyte:	Units	Level	MS	MSD	Criteria	Difference
Chromium	mg/L (ppm)	5	88	93	80-120	6
Copper	mg/L (ppm)	5	86	93	80-120	8
Nickel	mg/L (ppm)	10	91	.95	80-120	4
Zinc	mg/L (ppm)	5	91	93	80-120	2

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

KJ BI 6-16-97 2:05

SAMPLE CHAIN OF CUSTODY

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06/09/97

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth Albertson, M.S. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. Melanie Kirol, B.S. June 19, 1997 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

INVOICE # 97ACU0619-1 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford Seattle, WA 98134

RE: Project Metro Grab, PO #M57538: Results of testing requested by Gerry Thompson, Project Manager for material submitted on June 16, 1997.

FEDERAL TAX ID #(b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth Albertson, M.S. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. Melanie Kirol, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

June 19, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on June 16, 1997 from your Metro Grab, PO #M57538 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson Chemist

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